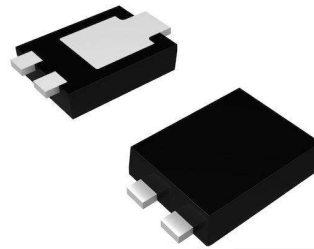


Schottky Barrier Rectifier in TO-277

Features

- Schottky barrier diodes
- Low forward voltage drop
- High junction temperature
- High forward surge current capability



LEFT PIN ○
 RIGHT PIN ○ → BOTTOMSIDE HEAT SINK

Mechanical Data

- **Case:** TO-277 (plastic package).
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	CSB5100SG	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	70	V
Maximum DC blocking voltage	V_{DC}	100	V
Maximum average forward rectified current	$I_{F(AV)}$	5.0	A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	120	A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150	°C

Electrical Characteristics

($T_A = 25\text{ °C}$ unless otherwise specified)

Parameter	Test Conditions	Symbol	CSB5100SG	Unit
Maximum instantaneous forward voltage	$I_F=5A, T_A=25\text{ °C}$	V_F	0.85	V
Maximum DC reverse current at rated DC blocking voltage	$T_A=25\text{ °C}$	I_R	0.05	mA
	$T_A=125\text{ °C}$		10	

Thermal Characteristics

Parameter	Symbol	CSB5100SG	Unit
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	60	°C/W
Operating junction temperature range	T_J	-55 to +150	°C
Storage temperature range	T_{STJ}	-55 to +150	°C

Note1: Thermal resistance from junction to lead, mounted on PCB with 5.0×5.0mm copper pads

Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Figure 1. Forward Current Derating Curve

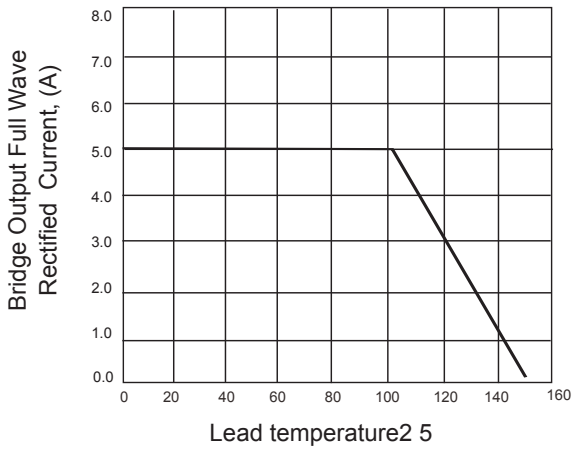


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

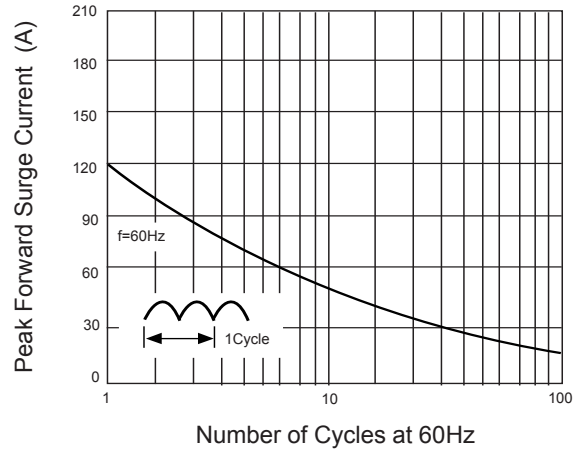


Figure 3. Typical Instantaneous Forward Characteristics

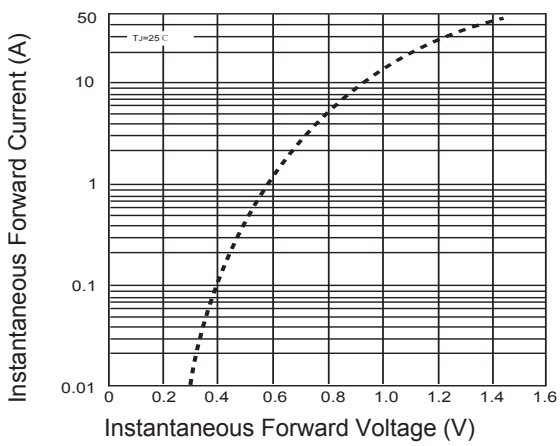
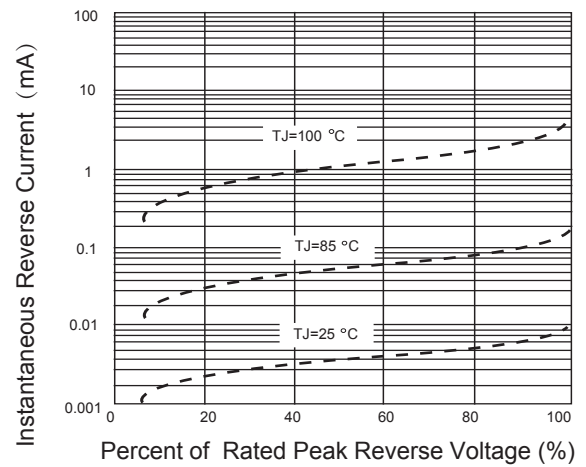
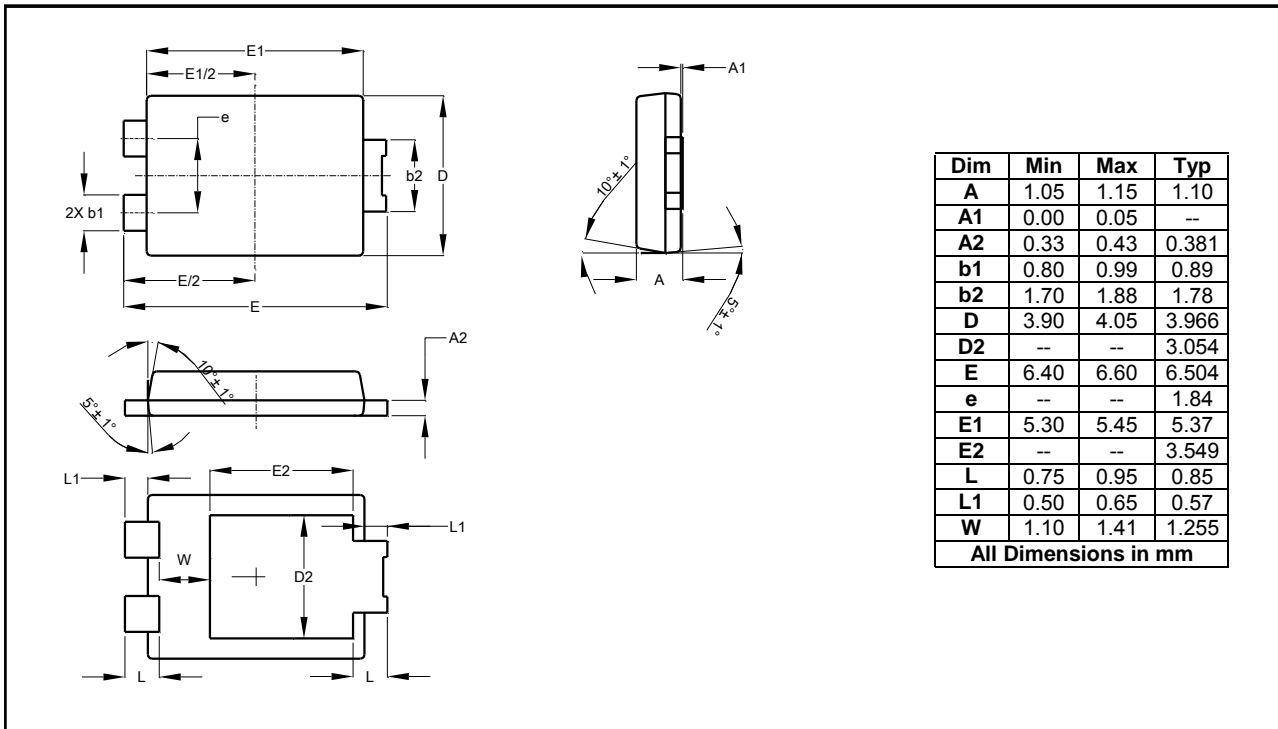


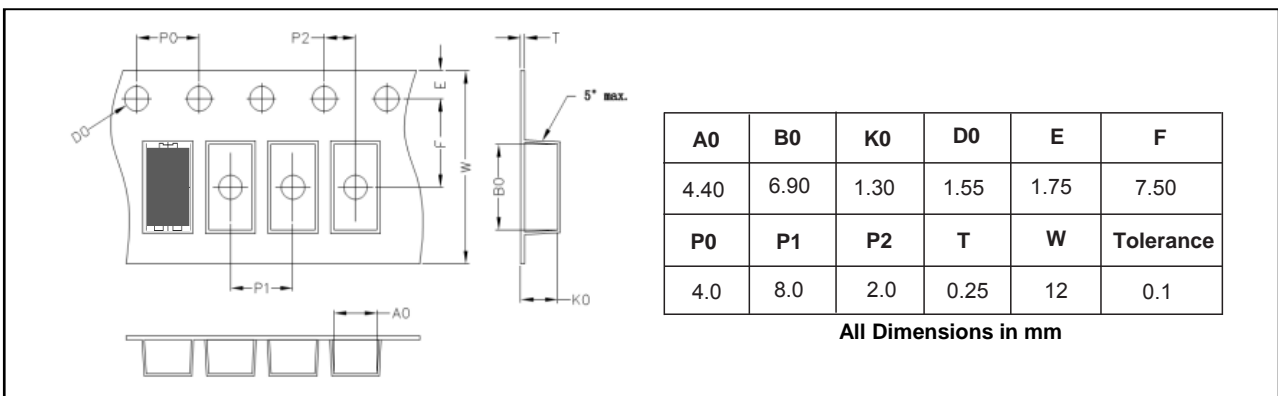
Figure 4. Typical Reverse Characteristics



Package Dimensions



Package information



Ordering information

Order code	Package	Packaging option	Reel size	Base quantity	Packaging specification
CSB5100SG	TO-277	Tape and reel	13'	5000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2020	1.0	Initial release

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